OUR BOOKSHELF.

The Hunterian Lectures on Colour-Vision and Colour-Blindness. Delivered before the Royal College of Surgeons of England on February 1 and 3, 1911, by Prof. F. W. Edridge-Green. Pp. 76. (London: Kegan, Paul and Co., Ltd., 1911.) Price 3*s*. 6*d*. net.

THESE lectures are two in number, and the lecturer devoted the first to his views of colour-vision and colour-blindness, the second to the means of detecting colour-blindness from a practical point of view. The first lecture describes Dr. Edridge-Green's explanation of colour-vision, for which he indicates visual purple as an essential factor. A large portion of the lecture is devoted to the visual purple and describes various phenomena which he has observed in reference to it. The "pros" are well given, but the "cons" are more or less absent. It is the latter which have led other investigators to reject the idea that this sensitive matter can fully explain the different phenomena which occur in colour-vision and colour-blindness. The true function of visual purple has to be further investigated. The part of the lecture which is devoted to a description of Dr. Edridge-Green's theory of colour-vision has been presented to the public in various publications. We need scarcely summarise the theory. It is one of several theories which have been propounded by different investigators, and, like all, is open to criticism.

The second lecture is devoted, as we have said, to the practical detection of colour-blindness. In it he describes the various tests which he has devised. The first is the lantern test. The lantern he describes in great detail, and informs us where it is to be obtained. Whether this test is efficient he proceeds to discuss. Then he tells us of his pocket wool tests, and how to use them. He finally gives us a description of his colour-perception spectrometer. This last instrument is ingenious, and answers the purpose for which it is required by the author. These lectures show that Dr. Edridge-Green has devoted much time and labour in evolving his theory. It is beside the mark to say whether we agree with it or not. Where energy is expended in scientific work, some step forward in furthering "natural knowledge" is sure to be forthcoming, and we may prognosticate that this will be the case with the author.

Les Sciences de la Nature en France au XVIII^e Siècle. By Prof. D. Mornet. Un Chapitre de l'Histoire des Idées. Pp. x+291. (Paris: Armand Colin, 1911.) Price 3.50 francs.

THIS is a scholarly and interesting discussion of a remarkable period in the history of natural science—an almost heroic period, with Buffon as one of the grand figures. It is as a chapter in intellectual development that the author considers the history of natural science in France in the eighteenth century, but it is significant of the book that it continually brings us to contemplate science as a social phenomenon.

The first part of the book deals with natural science finding itself, its struggle with theological intrusions, its process of purification. The second part deals with the organisation of science; the third with its diffusion and triumph. A fine picture is given of the confusion in the early eighteenth century, the credulity, the survivals of interpretation, the curiosity-collecting, the discovering of providence in nature, the nomenclature craze, and the determined opposition to scientific inquiry besides. But there were men of thews and sinews who would not be dis-discouraged; foundations were laid sword in hand, methods were discovered, and organisation grew with confidence.

Dr. Mornet tells us eloquently of science in its struggle for existence and of its increasing fitness thereby. He shows us how spiral-like the progress of science is, so often coming back on a higher turn to perennial problems, for they racked their brains in the eighteenth century just as we do to-day, over materialism and animism, mechanism and vitalism, automatism and real agency. Repeatedly, too, he brings us to see that "la science porte en elle des forces qui l'ont toujours poussée vers la vie." "The study of natural history in the eighteenth century suffices to show that life and speculation very quickly join hands."

The Gateways of Knowledge: An Introduction to the Study of the Senses. By J. A. Dell. Pp. xii+171. (Cambridge: University Press, 1912.) Price 2*s*. 6*d*.

MR. DELL is a schoolmaster in a Somerset school. He has read about and become interested in experimental psychology. In this book he seeks to interest his colleagues, and shows how boys and teachers may cooperate in experiments to their mutual advantage. It is intended, then, both for teacher and for pupil. The experiments have evidently been employed by the writer among his own pupils; they are suitable, we are told, for children of from twelve to fifteen years of age.

An admirable preface is contributed by Mr. Hugh Richardson, from which we cannot refrain from quoting the following sentences: "Hitherto the laboratory psychologist has often regarded the schoolmaster as too untrained and too ignorant to be a competent ally as an experimenter in mental fields. . . . But now these studies are beginning to interest the rising generation of schoolmasters. If some of us were not so busy organising laboratories and propagating cookery recipes for oxygen and chlorine, we might have leisure to explore the material lavished around us in the minds of our pupils."

As for the book itself, it is deserving of the highest praise. The text is most clearly written. The experiments demand the simplest apparatus conceivable. Exercises and problems upon the experiments are scattered through the book. There are chapters on the brain and sense organs, on touch, heat, cold, and pain, on the machinery and experience of movement, on taste, smell, hearing,

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on light and the eye, on how the eye is used in seeing, on the experience of sight, on action, and on memory. C. S. M.

The "J.R.B." Patent Adjustable Curve Ruler. (London: W. H. Harling.) Price 7*s.* 6*d.*, 10*s.*, and 12*s.* 6*d.*

DRAUGHTSMEN and students of engineering will find this curve ruler a useful addition to their stock of instruments. The instrument consists of a transparent strip of celluloid, which may be bent to fit any given curve, or to pass through a series of plotted points. The strip is clamped to two slotted brass bars, one of the clamps forming a swivel, which may be locked at any horizontal angle. The slotted bars may be clamped in any position and at any angle to a slotted wooden bar, which holds the whole appliance. Two other slotted brass bars may be clamped to the wooden bar in any position, and have hooks formed at the outer ends; these assist in bending the celluloid strip into the proposed curve, and give steadiness to the strip. Two celluloid strips are supplied, one about 0·05 and the other about 0·1 inch in thickness.

We have tested the appliance in drawing several curves, such as a curve to fit four points plotted at random, and the curves of a beam when loaded in various ways, and find that the maker's claims are justified. Curves of large or small radii of curvature are easily produced, and these are even and regular; the appliance is adjusted very simply, and retains the shape when once set, so that a curve may be duplicated many times.

Post Mortems and Morbid Anatomy. By Dr. Theodore Shennan. Pp. xv+496. (London: Constable and Co., Ltd., 1912.) Price 18*s.* net.

DR. SHENNAN is to be congratulated on having written a treatise that gives a full and lucid account of the whole art of performing necropsies; of studying scientifically the evidences of disease in the organs and tissues of the body, so far as these can be investigated in the post-mortem room; and of making permanent preparations of the material so obtained, either for investigation in the laboratory or for demonstration purposes in museums.

There is, perhaps, no branch of the work of the practising medical man for which such a guide-book is so urgently needed; and this work is sure to prove most helpful not only to the practitioner who is called upon to do autopsies, but also to the student who is acquiring a practical knowledge of pathology.

Though lacking originality, either in treatment or in matter, it is probably the most complete and well-balanced text-book in English dealing with practical pathology.

The illustrations are for the most part successful reproductions of photographs taken by the author and Mr. Norman; but some few of them (*e.g.*, Fig. 79) might with advantage have been replaced by drawings.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Forced Vibrations.

WITH regard to the subject of "Forced Vibrations" dealt with by Prof. Perry in his letter in NATURE of June 27 (p. 424), Prof. E. H. Barton, of Nottingham, puts the matter very clearly on p. 150 of his "Text-book of Sound," 1908, where he states:—"The frequency of the impressed force to make the amplitude a maximum is *lower* than that natural to the system with friction, while the frequency of the impressed force to make the kinetic energy a maximum is *above* that natural to the system with friction, and equals that if friction be absent." "Moreover, the squares of these three frequencies form an arithmetical progression whose common difference is proportional to the square of the damping coefficient."

I think Prof. Perry means to convey that these slight eccentricities from syntonic symmetry may be negligible in acoustical investigations (owing to their being well within the limenal region of physiological audition), but may rise to values at which they can be no longer neglected in other branches of interest, such as the æther-acoustics of radio-telegraphy, &c.

Prof. Perry would be doing real service by furnishing a non-mathematical explanation of these eccentricities; the graphical demonstration is a somewhat lengthy process. JOHN L. DUNK.

July 1.

Mendel and Nägeli.

MR. L. DONCASTER has recently given one explanation of the strange neglect of Nägeli to appreciate the results of Mendel. Perhaps the following footnote from Eimer's "Organic Evolution" (tr. J. T. Cunningham, 1890), p. 53, may supply another:—"Nägeli in the introduction to his book speaks very severely of those who without any justification undertake to express opinions upon the origin and evolution of organisms. He claims this right exclusively for physiologists, and counts among the non-physiologists both Darwin and Haeckel. Against such a close corporation I protest."

The "book" referred to seems to be the "Mechanisch-physiologische Abstammungslehre," published in 1884, and Mendel, who, if I remember rightly, was a professor of physics, is not likely to have fared better than Darwin or Haeckel, except for his then obscurity, at the hands of his distinguished correspondent. The treatment of Fleeming Jenkin's criticisms by Darwin himself forms a pleasing contrast to this misplaced pontificality. H. H. O'FARRELL.

The Avenue, Kew Gardens, July 1.

CONGRESS OF UNIVERSITIES OF THE EMPIRE.

IN an article which appeared in our issue of June 13 it was stated that fifty-four universities would send delegates to this Congress. The nascent university of Calgary was subsequently excluded from the official list, on the ground that for the present it proposes to confine its degrees to agriculture. It is not difficult to imagine the Secretary's feelings when he found that with the

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